Complete Summary

GUIDELINE TITLE

Practice parameter: evaluation and treatment of depression, psychosis, and dementia in Parkinson disease (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology.

BIBLIOGRAPHIC SOURCE(S)

Miyasaki JM, Shannon K, Voon V, Ravina B, Kleiner-Fisman G, Anderson K, Shulman LM, Gronseth G, Weiner WJ, Quality Standards Subcommittee of the American Academy of Neurology. Practice parameter: evaluation and treatment of depression, psychosis, and dementia in Parkinson disease (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2006 Apr 11;66(7):996-1002. [35 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Parkinson disease

GUIDELINE CATEGORY

Evaluation
Treatment

CLINICAL SPECIALTY

Family Practice
Geriatrics
Internal Medicine
Neurology
Psychiatry
Psychology

INTENDED USERS

Advanced Practice Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To make evidence-based treatment recommendations for patients with Parkinson disease (PD) with dementia, depression, and psychosis based on these questions:

1. What tools are effective to screen for depression, psychosis, and dementia in PD?
2. What are effective treatments for depression and psychosis in PD?
3. What are effective treatments for PD dementia or dementia with Lewy bodies (DLB)?

TARGET POPULATION

Patients with Parkinson disease

INTERVENTIONS AND PRACTICES CONSIDERED

Screening

Depression

1. Beck Depression Inventory-I (BDI-I)
2. Hamilton Depression Rating Scale (HDRS)
3. Montgomery Asberg Depression Rating Scale (MADRS)

Dementia

1. Mini-Mental State Examination (MMSE)
2. Cambridge Cognitive Examination (CAMCog)

Treatment

Depression

1. Amitriptyline

Psychosis

1. Clozapine
2. Quetiapine

Dementia

1. Donepezil
2. Rivastigmine

Interventions and practices considered but not recommended include Parkinson Psychosis Rating Scale (PPRS), electroencephalogram (EEG), non-tricyclic antidepressants, olanzapine, transcranial magnetic stimulation (TMS), electroconvulsive therapy (ECT), and piracetam.

MAJOR OUTCOMES CONSIDERED

- Rates of depression, psychosis, and dementia in patients with Parkinson disease
- Specificity and sensitivity of screening tools
- Side effects of treatment
- Symptom improvement

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

For the literature review, the following databases were searched: MEDLINE, EMBASE, CINAHL, the Cochrane Database of Systematic Reviews and Health and Psychosocial Instruments from 1966 to 2004. This was followed by a secondary search using the bibliography of retrieved articles and knowledge of the expert panel.

Search Terms

Psychosis scale OR depression scale OR psychosis diagnosis OR depression diagnosis OR psychosis treatment OR depression treatment OR cognitive treatment OR dementia diagnosis OR psychoses OR hallucinations OR psychotic OR delusion OR depression OR depressive disorder OR adjustment disorder OR experimental drug therapy OR dementia treatment AND Parkinson disease OR diffuse Lewy body disease OR dementia with Lewy bodies

Inclusion and Exclusion Criteria

For depression scales and treatment, Diagnostic and Statistical Manual (DSM) criteria for depression were the gold standard. DSM-IV criteria for major

depression were used unless otherwise stated in the study reviewed. Various criteria for the diagnosis of Parkinson Disease (PD) were allowed. Class IV studies were not considered if Class III studies were available. Similarly, Class III studies were not considered if Class II studies were available. All Class I and II studies were included.

NUMBER OF SOURCE DOCUMENTS

Depression screening tools: Three articles were accepted (Class I, Class II).

Depression treatment (pharmacologic): Six articles were accepted (Class I, II, or III).

Depression treatment (nonpharmacologic): One study was accepted (Class II).

Psychosis screening tools: One article was accepted (Class IV).

Psychosis treatment: Four articles were accepted (Class I and II).

Cognitive screening tools in Parkinson disease (PD): Two articles were accepted (Class I, III).

Cognitive treatment in PD or dementia with Lewy Bodies: Three articles were accepted (Class II).

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Classification of Evidence for Screening Articles

Class I: A statistical, population-based sample of patients studied at a uniform point of time (usually early) during the course of the condition. All patients undergo the intervention of interest. The outcome, if not objective, is determined in an evaluation that is masked to the patients' clinical presentations.

Class II: A statistical, non-referral-clinic-based sample of patients studied at a uniform point in time (usually early) during the course of the condition. Most patients undergo the intervention of interest. The outcome, if not objective, is determined in an evaluation that is masked to the patients' clinical presentations.

Class III: A sample of patients studied during the course of the condition. Some patients undergo the intervention of interest. The outcome, if not objective, is determined in an evaluation by someone other than the treating physician.

Class IV: Expert opinion, case reports or any study not meeting criteria for class I to III.

Classification of Evidence for Therapeutic Articles

Class I: Prospective, randomized, controlled clinical trial with masked outcome assessment, in a representative population. The following are required:

a. primary outcome (s) is/are clearly defined
b. exclusion/inclusion criteria are clearly defined
c. adequate accounting for drop-outs and cross-overs with numbers sufficiently low to have minimal potential for bias
d. relevant baseline characteristics are presented and substantially equivalent among treatment groups or there is appropriate statistical adjustment for differences

Class II: Prospective matched group cohort study in a representative population with masked outcome assessment that meets a-d above OR a randomized controlled trial (RCT) in a representative population that lacks one criterion a-d.

Class III: All other controlled trials including well-defined natural history controls or patients serving as own controls in a representative population, where outcome assessment is independently assessed or independently derived by objective outcome measurement.*

Class IV: Evidence from uncontrolled studies, case series, case reports, or expert opinion.

* Objective outcome measurement: an outcome measure that is unlikely to be affected by an observer's (patient, treating physician, investigator) expectation or bias (e.g., blood tests, administrative outcome data)

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Two authors reviewed each abstract for topic relevance. Two authors reviewed each full article to rate the level of evidence (Class I–IV). If there was disagreement, the entire panel reviewed the article and the level of evidence was decided by consensus. The panel reviewed all articles cited in the evidence below. If a panelist was an author of one of the articles, at least two other panelists reviewed that article.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Other

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Classification of Recommendations

Level A = Established as effective, ineffective, or harmful for the given condition in the specified population. (Level A rating requires at least two consistent Class I studies.)

Level B = Probably effective, ineffective, or harmful for the given condition in the specified population. (Level B rating requires at least one Class I study or at least two consistent Class II studies.)

Level C = Possibly effective, ineffective, or harmful for the given condition in the specified population. (Level C rating requires at least one Class II study or two consistent Class III studies.)

Level U = Data inadequate or conflicting; given current knowledge, treatment is unproven.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Draft guidelines were reviewed for accuracy, quality, and thoroughness by the American Academy of Neurology members, topic experts, and pertinent physician organizations.

Final guidelines were approved by the American Academy of Neurology Quality Standards Subcommittee on July 30, 2005, the American Academy of Neurology Practice Committee on December 15, 2005, the American Academy of Neurology Board of Directors on February 23, 2006. They were published in Neurology 2006;66:996-1002.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions of the classification of screening evidence (Class I–IV), classification of therapeutic evidence (Class I–IV), and strength of recommendations (A, B, C, U) are provided at the end of the "Major Recommendations" field.

In Patients with Parkinson Disease (PD), Which Are the Most Accurate Tools to Screen for Depression?

Recommendations

The Beck Depression Inventory-I (BDI-I) and Hamilton Depression Rating Scale (HDRS) should be considered for depression screening in PD (**Level B**).

Montgomery Asberg Depression Rating Scale (MADRS) may be considered for screening for depression associated with PD (**Level C**).

In Patients with PD, Which Are the Most Accurate Tools to Screen for Psychosis?

Recommendations

No recommendation is made.

In Patients with PD, Which Are the Most Accurate Tools to Screen for Dementia?

Recommendation

The Mini-Mental State Examination (MMSE) and the Cambridge Cognitive Examination (CAMCog) should be considered as screening tools for dementia in patients with PD (**Level B**).

In Patients with PD, What Is the Best Pharmacologic Treatment for Depression?

Recommendations

Amitriptyline may be considered in the treatment of depression associated with PD (**Level C**). Although the highest level of evidence is for amitriptyline, it is not necessarily the first choice for treatment of depression associated with PD. There is insufficient evidence to make recommendations regarding other treatments for depression in PD. Absence of literature demonstrating clear efficacy of non-tricyclic antidepressants is not the same as absence of efficacy.

In Patients with PD and Depression, What Are the Best Nonpharmacologic Treatments?

Recommendation

No recommendations were made.

In Patients With PD and Psychosis, What Is the Best Treatment?

Recommendations

For patients with PD and psychosis, clozapine should be considered (**Level B**). Clozapine use is associated with agranulocytosis that may be fatal. The absolute neutrophil count must be monitored. Monitoring requirements may vary according to country.

For patients with PD and psychosis, quetiapine may be considered (**Level C**).

For patients with PD and psychosis, olanzapine should not be routinely considered (**Level B**).

What Is the Most Effective Treatment for Dementia in PD or Dementia with Lewy Bodies (DLB)?

Recommendations

Donepezil should be considered for the treatment of dementia in PD (**Level B**).

Rivastigmine should be considered for the treatment of dementia in PD or DLB (**Level B**).

Definitions:

Classification of Evidence for Screening Articles

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d. relevant baseline characteristics are presented and substantially equivalent among treatment groups or there is appropriate statistical adjustment for differences

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Class III: All other controlled trials including well-defined natural history controls or patients serving as own controls in a representative population, where outcome assessment is independently assessed or independently derived by objective outcome measurement.*

Class IV: Evidence from uncontrolled studies, case series, case reports, or expert opinion.

* Objective outcome measurement: an outcome measure that is unlikely to be affected by an observer's (patient, treating physician, investigator) expectation or bias (e.g., blood tests, administrative outcome data)

Classification of Recommendations

Level A = Established as effective, ineffective, or harmful for the given condition in the specified population. (Level A rating requires at least two consistent Class I studies.)

Level B = Probably effective, ineffective, or harmful for the given condition in the specified population. (Level B rating requires at least one Class I study or at least two consistent Class II studies.)

Level C = Possibly effective, ineffective, or harmful for the given condition in the specified population. (Level C rating requires at least one Class II study or two consistent Class III studies.)

Level U = Data inadequate or conflicting; given current knowledge, treatment is unproven.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate evaluation and treatment of depression, psychosis and dementia in patients with Parkinson disease

POTENTIAL HARMS

- There is a concern that all atypical neuroleptics have a small increased risk of mortality particularly in elderly patients with dementia who are treated for behavioral disorders.
- Clozapine use is associated with agranulocytosis that may be fatal. The absolute neutrophil count must be monitored.

QUALIFYING STATEMENTS

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This statement is provided as an educational service of the American Academy of Neurology (AAN). It is based on an assessment of current scientific and clinical information. It is not intended to include all possible proper methods of care for a particular neurologic problem or all legitimate criteria for choosing to use a specific procedure. Neither is it intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on all of the circumstances involved.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Patient Resources
Personal Digital Assistant (PDA) Downloads
Quick Reference Guides/Physician Guides

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Miyasaki JM, Shannon K, Voon V, Ravina B, Kleiner-Fisman G, Anderson K, Shulman LM, Gronseth G, Weiner WJ, Quality Standards Subcommittee of the American Academy of Neurology. Practice parameter: evaluation and treatment of depression, psychosis, and dementia in Parkinson disease (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2006 Apr 11;66(7):996-1002. [35 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2006 Apr 11

GUIDELINE DEVELOPER(S)

American Academy of Neurology - Medical Specialty Society

SOURCE(S) OF FUNDING

American Academy of Neurology (AAN)
Michael J. Fox Foundation

GUIDELINE COMMITTEE

Quality Standards Subcommittee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Dr. Miyasaki received research funds from Boehringer Ingelheim, Teva, and Janssen Ortho and consulting fees from Boehringer Ingelheim. Dr. Shannon received research funds from Teva. Dr. Shulman received research grants or unrestricted educational grants from Pfizer, Novartis, and Teva. Dr. Weiner received research grants from Teva, Boehringer Ingelheim, consultancy fees from Teva, and is a member of Boehringer Ingelheim's speakers bureau. Drs. Anderson, Ravina, and Gronseth have nothing to disclose.

ENDORSER(S)

National Parkinson Foundation - Disease Specific Society
Parkinson's Disease Foundation - Disease Specific Society

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: A list of American Academy of Neurology (AAN) guidelines, along with a link to a Portable Document Format (PDF) file for this guideline, is available at the AAN Web site.

Print copies: Available from the AAN Member Services Center, (800) 879-1960, or from AAN, 1080 Montreal Avenue, St. Paul, MN 55116.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- AAN guideline development process [online]. St. Paul (MN): American Academy of Neurology. Available from the American Academy of Neurology Web site.
- Evaluation and treatment of depression, psychosis and dementia in Parkinson disease. AAN summary of evidence-based guideline for clinicians. St. Paul (MN): American Academy of Neurology. 2 p. Available in Portable Document Format (PDF) from the AAN Web site.
- Practice parameter: diagnosis and prognosis for new onset Parkinson disease. St. Paul (MN): American Academy of Neurology. 2006. 12 p. Available for personal digital assistant (PDA) download from the AAN Web site.

PATIENT RESOURCES

The following is available:

- Screening and treatment for depression, dementia, and psychosis in Parkinson disease. AAN guideline summary for patients and their families. St. Paul (MN): American Academy of Neurology (AAN). 2 p.

Electronic copies: Available in Portable Document Format (PDF) from the AAN Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI on June 6, 2006. The information was verified by the guideline developer on August 24, 2006. This summary was updated by ECRI Institute on November 9, 2007, following the U.S. Food and Drug Administration advisory on Antidepressant drugs.

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